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PATENT
Docket No. H 4898 PCT/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Tsujino, et al.

Serial No. 09/601,868 **Examiner:** E. Elhilo
Filed: August 9, 2000 **Art Unit:** 1751

Title: A PERMANENT WAVE AGENT COMPOSITION HAVING DYEING EFFECT AND METHOD FOR DYEING HAIR USING THE SAME

SUPPLEMENTAL APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

This supplemental appeal brief is submitted in response to a communication from Technology Center 1700, paper 15, which identified the appeal brief submitted on July 3, 2003 as being defective due to a typographical error in section (7), entitled Grouping Of Claims. This supplemental appeal brief now correctly identifies the claims on appeal.

The Commissioner is authorized to charge any deficiency in the required fee or to credit any overpayment made in connection with this Appeal Brief to Deposit Account 01-1250.

Respectfully yours,

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(610) 278-4964

Henkel Corporation
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2500 Renaissance Blvd., Suite 200
Gulph Mills, PA 19406

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APPELLANT'S BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

Appellants submit this brief, in triplicate, in support for their appeal to the Board of Patent Appeals and Interferences. A Notice of Appeal was timely filed on May 7, 2003.

(1) REAL PARTY IN INTEREST

The real party in interest in the patent application that is the subject of this appeal is Henkel Lion Cosmetics Co., Ltd.

(2) RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences pending before the Honorable Board that relate to the present appeal.

(3) STATUS OF CLAIMS

Claims 10 to 25 are currently pending in the subject application. Claims 1 to 9 had been previously cancelled. The full texts of claims 10 to 25 are set forth in the Appendix of this Appeal Brief.

(4) STATUS OF AMENDMENTS

The amendment submitted by Applicants on April 4, 2003 in response to the Final Office Action, dated January 17, 2003, has not been entered. In the proposed amendment, claims 15 and 16 were cancelled and new claim 26 was added as a substitute for claims 15 and 16. Since this amendment has not been entered, the claims presented for appeal are those of record at the time of the issuance of the Final Rejection.

(5) SUMMARY OF THE INVENTION

The present invention pertains to a permanent wave composition for oxidatively fixing or setting hair (claim 10 et seq.), a permanent wave kit (claim 15 et seq.) and a method for permanently waving hair (claim 19 et seq.). The composition of the invention also includes at least one cationic dye. The cationic dye contains a quaternary nitrogen group and an -X=N- bond, in which X is a nitrogen atom or a -CH- group. This cationic dye exhibits specific efficacy in dyeing hair that is currently being subjected to, or has recently been, permanently waved.

(6) ISSUES

Claims 10 to 25 stand rejected under 35 USC 102(b) as being anticipated by Rondeau et al. (WO 97/39727).

(7) GROUPING OF CLAIMS

There are three separable groupings of claims within this application. They are:

(a) claims 10-14, relating to a composition for permanently waving and dyeing hair,

(b) claims 15-18, relating to a kit comprising components for the permanent waving and dyeing of hair, and

(c) claims 19-25, relating to a method for permanently waving and dyeing hair.

Applicants consider each grouping of claims capable of standing or falling independently.

(8) ARGUMENT

All claims stand rejected as being anticipated by Rondeau et al., WO 97/39727. The Examiner has cited this reference because it discloses a cationic direct hair dye and an oxidative hair dye system that consists of an oxidative precursor and an oxidizing agent. Also disclosed is a method for dyeing hair comprising the steps of applying to the hair a dye composition consisting of both cationic direct dyes and oxidation dyes. In addition, Rondeau et al. disclose a kit having 3 or more compartments that may be used in conjunction with their hair dye system.

Appellants' invention is of a method and composition for dyeing hair in concert with the permanent waving of hair. It consists of a cationic direct dye (for the purpose of dyeing the hair) and a composition comprising a reducing agent and an oxidizing agent (for the purpose of permanently waving the hair). Appellants also claim a method for dyeing hair either contemporaneously with or subsequent to the permanent waving of the hair. In addition, Appellants claim a two-compartment kit for carrying out the objectives of the present invention.

Rondeau et al. disclose a hair dyeing composition. Appellants claim a composition consisting of an oxidative fixing agent for the permanent waving of hair and a cationic dyeing agent. The Rondeau hair dyeing composition consists of, as essential components, (a) an oxidation dye precursor, (b) an oxidizing agent to catalyze the oxidation dye precursor, and (c) a cationic dye. Component (a) may also include a reducing agent, such as thioglycolic acid, in order to prevent the oxidation of the oxidation dye precursor prior to its application on the hair (kindly refer to col. 5, lines 22-24 of US Patent No. 6,190,421 B1, the US counterpart of the cited reference). The hair coloring method of Rondeau et al. require that the composition containing the dye precursors is mixed with the composition containing the oxidizing agent and the cationic dye just prior to application onto the hair.

In contrast, Appellants' invention consists of a composition that contains a reducing agent, such as thioglycolic acid, that is initially applied to the hair for the purpose of breaking the disulfide bonds deep within the structure of each strand of hair. The hair may then be reshaped and styled. Subsequently, the composition containing the oxidizing agent and the cationic dye is applied to the styled hair. The oxidizing agent re-establishes the disulfide bonds, thus maintaining the hair in the desired shaped or styled configuration.

The Examiner stated, in the Office Action of January 17, 2003, in section 3, that Rondeau et al. "...teaches and discloses a composition for permanent-waving the hair...". Appellants respectfully disagree with this characterization. Turning to the US counterpart patent of the cited reference, US 6,190,421 B1, Rondeau et al. state that their dye formulations, "...show resistance towards...various treatments *to which the hair may be subjected* (washing, permanent-waving)..." [emphasis added]. Rondeau et al. do not state that their formulation is *for* the permanent-waving of hair. Rather, they state that their dye formulation is capable of tolerating the harsh conditions created *by* the application of permanent waving systems. Appellants respectfully submit that this distinction is critical in determining the patentability of all or part of the pending claims.

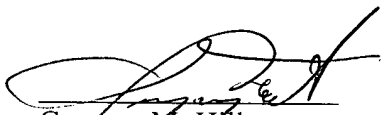
Appellants' kit, as disclosed on page 8, lines 5-11, consists of two compartments. The first compartment contains the reducing agent that is first applied to the hair to be permanently waved. The second compartment contains the cationic dye and the oxidation agent. The kit of Rondeau et al., in contrast, is for hair dyeing and consists of "at least three compartments" (col. 2, lines 21-23 of '421). The first compartment contains the oxidation dye precursor and the optional reducing agent. The second compartment contains the cationic direct dye and the third compartment contains the oxidation agent. By contrast, the kit of Appellants' contains, in a single compartment, both the oxidation agent and the direct dye. Also, a single compartment within Appellants' kit contains the reducing agent only. The kit of Rondeau et al. has no corresponding compartment.

As for Appellants method pertaining to the permanent waving of hair, Rondeau et al. only disclose a method for the dyeing of hair. The reference is clearly silent about methods for applying permanent wave treatments to hair. Without such a disclosure, it is respectfully submitted that Rondeau et al. fail to anticipate Appellants claimed method for applying a permanent wave treatment to hair.

Conclusion

Appellants respectfully submit that the rejection of all appealed claims under 35 USC 102(b) over the cited reference, WO 97/397727, should be withdrawn. Accordingly, Appellants kindly invite the Honorable Board to reverse the standing rejection and direct the issuance of all claims on appeal.

Respectfully submitted,



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(9) APPENDIX

10. A composition for permanently waving hair comprising

a) at least one cationic dye , wherein the cationic dye is present in an amount effective to color hair and has a quaternary nitrogen atom that may be optionally delocalizable and an —X=N— bond, wherein X is a nitrogen atom or a —CH— group; and

b) at least one oxidative fixing agent for permanently waving the hair.

11. The composition of claim 10 wherein the cationic dye is represented by formula I:

$$[A{-}Z{=}N{-}B]^{+}\ X^{-} \qquad (I)$$

wherein Z is a nitrogen atom or a CH group;

A and B are independently of one another, a benzene ring or aromatic heterocycle group that is substituted or unsubstituted; and

X^- is an anion.

12. The composition of claim 11 wherein A or B or both have one or more substituents selected from halogen atoms, NR_1R_2 groups, or OR_1 groups, wherein R_1 and R_2 are independently selected from hydrogen, a C_1 to C_8 alkyl group, a C_1 to C_4 hydroxyalkyl group, or a phenyl group.

13. The composition of claim 10 wherein the cationic dye comprises 4-aminophenylazo-2-hydroxy-7-trimethylammoniumnaphthalene chloride, 2-methoxyphenylazo-2-hydroxy-7-trimethylammoniumnaphthalene chloride, 4-amino-3-nitrophenylazo-2-hydroxy-7-trimethylammoniumnaphthalenechloride, 3-trimethylammoniumphenylazo-4N-phenyl-2-methyl-5-hydroxypyrazole chloride, (1-methyl-1-phenyl)-2-(1-methine-4N-methylpyridinium) hydrazine chloride, (1-methyl-1-paramethoxyphenyl)-2-(1-methine-4N-methylpyridinium) hydrazine chloride, (1-methyl-1-paramethoxyphenyl)-2-(1-methine-4N-methylpyridinium) hydrazine

methylsulfate, 4-dimethylaminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-dimethylaminophenylazo-2N-methyl-3N-methylpyrazolium chloride, 4-methylaminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-aminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-dimethylaminophenylazo-4N-methylpyridinium chloride, 4-dimethylaminophenylazo-4N-oxidopyridinium chloride, 4-(4-aminophenylamino)phenylazo-2N-methyl-5N-methylimidazolium, or 3-amino-7-(dimethylamino)-2-methoxyphenoxazine-5-ium chloride, or combinations thereof.

14. The composition of claim 10 wherein the cationic dye is present in an amount of from 0.001 weight percent to 3 weight percent, based on the total weight of the composition.

15. A kit for permanently waving hair comprising:

(a) a cationic dye solution comprising at least one cationic dye, wherein the cationic dye is present in an amount effective to color hair and has a quaternary nitrogen atom that is optionally delocalizable and an -X=N- bond, wherein X is a nitrogen atom or an -CH- group; and

(b) an oxidative fixing solution comprising at least one oxidative fixing agent for permanently waving the hair.

16. The kit of claim 15 further comprising a reducing solution comprising at least one reducing agent.

17. The kit of claim 16 wherein the cationic dye is represented by formula I:

$$[A{-}Z{=}N{-}B]^{+}\,X^{-} \qquad (I)$$

wherein Z is a nitrogen atom or a CH group;

A and B are independently of one another, a benzene ring or aromatic heterocycle group that is substituted or unsubstituted; and

X^- is an anion.

18. The kit of claim 15 wherein the cationic dye comprises 4-aminophenylazo-2-hydroxy-7-trimethylammoniumnaphthalene chloride, 2-methoxyphenylazo-2-hydroxy-7-trimethylammoniumnaphthalene chloride, 4-amino-3-nitrophenylazo-2-hydroxy-7-trimethylammoniumnaphthalenechloride, 3-trimethylammoniumphenylazo-4N-phenyl-2-methyl-5-hydroxypyrazole chloride, (1-methyl-1-phenyl)-2-(1-methine-4N-methylpyridinium) hydrazine chloride, (1-methyl-1-paramethoxyphenyl)-2-(1-methine-4N-methylpyridinium) hydrazine chloride, (1-methyl-1-paramethoxyphenyl)-2-(1-methine-4N-methylpyridinium) hydrazine methylsulfate, 4-dimethylaminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-dimethylaminophenylazo-2N-methyl-3N-methylpyrazolium chloride, 4-methylaminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-aminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-dimethylaminophenylazo-4N-methylpyridinium chloride, 4-dimethylaminophenylazo-4N-oxidopyridinium chloride, 4-(4-aminophenylamino)phenylazo-2N-methyl-5N-methylimidazolium, or 3-amino-7-(dimethylamino)-2-methoxyphenoxazine-5-ium chloride, or combinations thereof.

19. A method of permanently waving hair comprising

(a) applying a reducing solution to hair wherein the reducing solution comprises at least one reducing agent;

(b) applying at least one oxidative fixing solution to the hair wherein the oxidative fixing solution comprises at least one oxidative fixing agent for permanently waving the hair; and

(c) applying to the hair at least one cationic dye in an amount effective to color the hair and having a quaternary nitrogen atom that is optionally delocalizable and an —X=N— bond, wherein X is a nitrogen atom or a —CH— group, and wherein the cationic dye is applied to the hair (i) as a component of the oxidative fixing solution, or (ii) as a component of a third solution after application of the oxidative fixing solution, or (iii) both.

20. The method of claim 19 wherein the cationic dye is represented by formula I:

$$[A{-}Z{=}N{-}B]^{+}\ X^{-} \qquad (I)$$

wherein Z is a nitrogen atom or a CH group;

A and B are independently of one another, a benzene ring or aromatic heterocycle group that is substituted or unsubstituted; and

X^- is an anion.

21. The method of claim 20 wherein A or B or both have one or more substituents selected from halogen atoms, NR_1R_2 groups, or OR_1 groups, wherein R_1 and R_2 are independently selected from hydrogen, a C_1 to C_8 alkyl group, a C_1 to C_4 hydroxyalkyl group, or a phenyl group.

22. The method of claim 21 wherein the cationic dye comprises 4-aminophenylazo-2-hydroxy-7-trimethylammoniumnaphthalene chloride, 2-methoxyphenylazo-2-hydroxy-7-trimethylammoniumnaphthalene chloride, 4-amino-3-nitrophenylazo-2-hydroxy-7-trimethylammoniumnaphthalenechloride, 3-trimethylammoniumphenylazo-4N-phenyl-2-methyl-5-hydroxypyrazole chloride, (1-methyl-1-phenyl)-2-(1-methine-4N-methylpyridinium) hydrazine chloride, (1-methyl-1-paramethoxyphenyl)-2-(1-methine-4N-methylpyridinium) hydrazine chloride, (1-methyl-1-paramethoxyphenyl)-2-(1-methine-4N-methylpyridinium) hydrazine methylsulfate, 4-dimethylaminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-dimethylaminophenylazo-2N-methyl-3N-methylpyrazolium chloride, 4-methylaminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-aminophenylazo-2N-methyl-5N-methylimidazolium chloride, 4-dimethylaminophenylazo-4N-methylpyridinium chloride, 4-dimethylaminophenylazo-4N-oxidopyridinium chloride, 4-(4-aminophenylamino)phenylazo-2N-methyl-5N-methylimidazolium, or 3-amino-7-(dimethylamino)-2-methoxyphenoxazine-5-ium chloride, or combinations thereof.

23. The method of claim 19 wherein the cationic dye is present in the oxidative fixing solution or the third solution in an amount of from 0.001 weight percent to 3 weight percent,

based on the total weight of the solution.

24. The method of claim 19 wherein the solution containing the cationic dye has a pH of 5 or greater.

25. The method of claim 24 wherein the solution containing the cationic dye comprises 60 weight percent or greater water.